Alzheimer's Disease: Trade-off for Increased Survival with Atherosclerosis?

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In the May 2007 issue of this journal, Van Oijen and colleagues[1] present important longitudinal data on the association between atherosclerosis and Alzheimer's disease (AD).
With the acknowledgement that their study is not proof of a causal relation, the authors describe currently accepted hypothetical mechanisms that explain how atherosclerosis contributes to AD. I propose an alternative interpretation of their data that supports a more controversial hypothesis for their observations.
Van Oijen and colleagues[1] found a strong relation between atherosclerosis risk scores and mortality. Interestingly, the subjects who had the highest scores for intima media thickness and carotid plaques at screening, and were alive at follow-up approximately 8 years later, were more likely to have AD (hazard ratio almost equal to 2.5).
Can we interpret these data to imply that there was increased mortality from atherosclerosis in those without AD, and therefore that having AD was associated with a survival benefit? The authors refer to studies that indicate that mortality risk from atherosclerosis is especially conveyed by overt cerebrovascular disease.[1] After hypoxia/hypoperfusion, increased production of amyloid precursor protein has been observed in surviving brain tissue; this has been interpreted as a neuroprotective response.[2] It can be hypothesized that certain individuals have an enhanced amyloid precursor protein response that offers increased protection against neuronal ischemia in the face of atherosclerotic disease. For these individuals, development of AD through triggering of the amyloid cascade can be seen as a negative trade-off for this survival benefit.

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References
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